

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 March 2005 (03.03.2005)

PCT

(10) International Publication Number
WO 2005/018699 A1

(51) International Patent Classification⁷: **A61L 27/40**,
27/54

(21) International Application Number:
PCT/SE2004/001082

(22) International Filing Date: 1 July 2004 (01.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/481,274 21 August 2003 (21.08.2003) US

(71) Applicants and

(72) Inventors: ASPENBERG, Per, Vilhelm [SE/SE]; Ås-
gatan 4, S-582 28 Linköping (SE). TENGVALL, Pentti,
Olavi [SE/SE]; Vifolkagatan 17, S-582 37 Linköping (SE).

(74) Agents: RUSSELL, Nan et al.; Fasth Law Offices, 629 E.
Boca Raton Road, Phoenix, AZ 85022 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

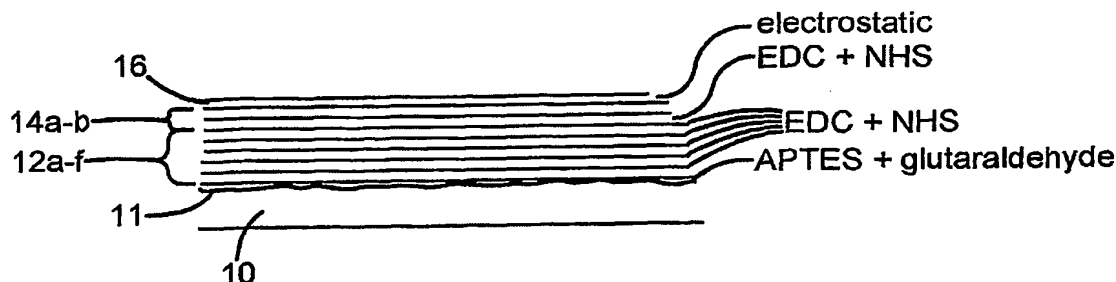
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: BISPHOSPHONATE COATED IMPLANT DEVICE AND METHOD THEREFOR



(57) **Abstract**—The method of the present invention is for coating an implant device. The implant device is coated with a protein film, such as fibrinogen. A first bisphosphonate substance, such as pamidronate, is immobilized to the protein film. A second bisphosphonate substance, such as ibandronate, is adsorbed to the first bisphosphonate wherein the first bisphosphonate is different from the second bisphosphonate.